

122,650 gallons of partially treated wastewater. The causes of these upsets were primarily due to elevated flows from infiltration into the collection system during high rainfall events (1 event) and debris blockage in the lines at the facility (1 event).

The above represents reductions of 60% and 84%, respectively, in the frequency of and volumes of partially treated wastewater discharges when compared to the previous reporting period (July, 2013 – June, 2014)

Upset events were reported to NCDENR. The City responded to each event to provide control, impact minimization, and clean-up activities. Additional actions were taken by the City as directed by NCDENR as well as the City self initiated actions to minimize future upset occurrences.

Wastewater Treatment NPDES Permit Excursions

The Long Creek Wastewater Treatment Facility was fully compliant with all parameters contained in the NPDES operating permit for nine (9) months.

The above represent an improvement of 22% in permit compliance performance when compared to the previous reporting period (July, 2013 – June, 2014).

There was one (1) month (July, 2014) that the facility exceeded its monthly average discharge limits for Mercury (12 ng/L.). Mercury is a naturally occurring heavy metal that is a pollutant of concern due to the potential chronic & acute impact on the aquatic life and the benthos of the receiving stream.

The facility conducts toxicity testing of the effluent quarterly. This testing provides an indication of the potential of the discharge from the facility to affect the mortality and birth rates of one particular aquatic species. During the reporting period, the facility failed two (2) of the quarterly testing events (Sept. & Dec., 2014) with respect to chronic (long term) effects. Due to the sensitivity of the aquatic species, a specific cause of the

test failures could not be readily identified from other parameter testing. The City responded by reviewing the performance of each treatment subsystem and made minor adjustments to improve the overall treatment performance of the facility. Subsequent quarterly testing events indicated compliant results for all toxicity parameters.

Have questions concerning the Annual Report or need additional information?

Then please contact:
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Public Utilities Department
144 North Second Street
PO Box 190
Albemarle, NC 28001
704.984.9605
www.ci.albemarle.nc.us

Annual Report Availability

This report is made available with a customer's utility bill. Additional copies of this report are available in the offices of the Public Utilities Department in the Albemarle City Hall (144 N. Second St., Albemarle, NC 28001) and the City's website, www.ci.albemarle.nc.us

2014-2015 Quick Facts & Figures

- Wastewater Collected & Treated – 2.05 Billion Gals.
- Sanitary Sewer Lines Cleaned – 95 miles
- It takes an average of 6-8 hours for wastewater to be treated through the Long Creek Wastewater Treatment Plant before it can be discharged.

Improvement Projects under Construction or Completed

- Sanitary Sewer Rehabilitation (Ph. I)
(reducing inflow & infiltration (I&I) in the system)
Total Project Cost - \$ 3.5 Million
- WWTP Headworks Improvements (Ph. II)
(improving treatment processes & equipment)
Total Project Cost - \$ 3.1 Million

ANNUAL WASTEWATER SYSTEM PERFORMANCE

REPORT

FY 2014 – 2015

(JULY, 2014 – JUNE, 2015)



CITY OF ALBEMARLE, NC

PUBLIC UTILITIES DEPARTMENT

SYSTEMS DIVISION

PLANTS DIVISION



FY 2014-2015 ANNUAL REPORT

The General Assembly of the State of North Carolina through the General Statutes require all entities that operate wastewater collection and transmission systems and wastewater treatment facilities make an Annual Report to their customers.

Sanitary Sewer Collection & Transmission System

The Sanitary Sewer Collection and Transmission System for the City of Albemarle is comprised of approximately 6,200 connections that serve residential, commercial, and industrial customers. There are approximately 190 miles of sanitary sewer lines in the system with sizes that vary from 6 inches to 60 inches in diameter. Eight (8) pump stations are also part of the system where flow in the collection system by gravity cannot be obtained. The purpose of the system is to collect and transport wastewater generated by our customers for treatment and discharge.

Long Creek Wastewater Treatment Facility

Wastewater from the collection system ultimately is transported to the Long Creek Wastewater Treatment Facility for treatment before being discharged into Long Creek. The facility has a rated capacity to treat up to 12 million gallons per day. The facility is based on an extended aeration aerobic sludge process with tertiary filtration to augment the treatment process.

As a result of the treatment process, bio-solids are generated as a waste material and are currently being dewatered and incinerated at the Rocky River Wastewater Treatment Facility in Concord, NC.

Operating Permits

The wastewater treatment facility operates under a permit issued by the State of North Carolina through the US Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES) program. The permit includes monitoring requirements and discharge

limits for pollutants. Some of these limits vary with seasons and may have different limits for monthly average, weekly average, and daily maximum. The limits are primarily based on the receiving streams ability to maintain aquatic life.

The collection and transport system operates under a permit issued by the State of North Carolina through the NC Department of Environment and Natural Resources (NCDENR). The permit contains specific requirements for the operation and maintenance of the system. Among those requirements are the response and reporting of Sanitary Sewer Overflows (SSO).

NC Statutes require that professional oversight of the respective facilities and systems be provided to ensure compliance with the permits. The individuals responsible for this oversight are referred to as the "Operator in Responsible Charge" (ORC). These are individuals that are licensed by the State of North Carolina and have demonstrated competency through training, experience, and testing requirements. Continuing education is also a requirement to maintain the individual's license.

City of Albemarle Wastewater Operating Permits

Long Creek Wastewater Treatment Facility

NPDES Permit No. – NC0024244

ORC – Brandon Plyler, Chief Operator

Sanitary Sewer Collection & Transmission System

NCDENR Permit No. – WQCS00016

ORC – Bryan Hinson, Superintendent W & S Systems

2014-2015 (July 1 – June 30) Compliance Summary

The operating permits require that a compliance summary be provided in the Annual Report discussing all sanitary sewer overflows (SSOs), and excursions of discharge limits and in reporting requirements contained in any state issued permit.

The City of Albemarle strives to maintain compliance with the conditions and requirement of all federal and state permits involved in wastewater collection and treatment. Unfortunately, the City did experience SSO's, wastewater treatment plant upsets, and excursions of its discharge limits. However, the general health and welfare of the public was not threatened and impacts to the receiving streams were considered as none to minimal.

Sanitary Sewer Overflows (Untreated)

During the reporting period, the Collection & Transmission System experienced ten (10) discrete overflow events at various locations in the City. The estimated total volume of the overflows for the reporting period is 36,200 gallons. The number of operating days affected by these events totaled ten (10) days for the reporting period.

Events were primarily due to infiltration of rainfall into the system affecting the transport capacity of the lines (5 events). Clogged/broken sewer lines (5 events) were the primary causes of the remaining events.

The above represents reductions of 64% and 85%, respectively, in the number of overflow events and the overflow volumes when compared to the previous reporting period (July, 2013-June, 2014).

Each overflow event estimated to be in excess of 1,000 gallons or any overflow making its way to a storm drain, stream, or body of water was reported to NCDENR and a press release was issued. The City responded to each event to provide control, impact minimization, and clean-up activities. Additional actions were taken by the City as directed by NCDENR as well as the City self initiated actions to minimize future overflow occurrences.

Wastewater Treatment Plant Upsets (Partially Treated)

During the reporting period, the Long Creek Wastewater Treatment Facility experienced two (2) discrete plant upset events resulting in the discharge of approximately